

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for the conversion of a coal-containing feedstock to a gas product comprising methane, comprising contacting said coal feedstock with a treatment gas comprising at least about 40 weight percent H₂ at a reaction temperature of at least about 600°C for a time sufficient to convert at least about 90 percent of the volatile matter in the coal-containing feedstock to methane and form a purified carbon product.
2. (Original) A method as recited in Claim 1, wherein said coal feedstock comprises low-grade coal having a sulfur content of at least about 2 weight percent.
3. (Original) A method as recited in Claim 1, wherein said reducing gas comprises at least about 99 weight percent H₂.
4. (Original) A method as recited in Claim 1, wherein said reducing gas is formed by steam oxidation of iron.
5. (Original) A method as recited in Claim 1, wherein said reducing gas comprises H₂ and CO.
6. (Original) A method as recited in Claim 1, wherein said reducing gas is formed by partial oxidation of carbon.
7. (Original) A method as recited in Claim 1, wherein said reaction temperature is from about 700°C to about 900°C.
8. (Original) A method as recited in Claim 1, further comprising the step of combusting at least a portion of said methane to generate electricity.
9. (Original) A method as recited in Claim 1, further comprising the step of combusting at least a portion of said methane in a combined cycle generator to generate electricity.
10. (Original) A method as recited in Claim 1, further comprising the step of reacting said purified carbon product and at least a portion of said methane in a boiler to

generate electricity.

11. (Original) A method as recited in Claim 1, further comprising the step of diverting at least a portion of said treatment gas and combining said portion with said methane.

12. (Original) A method for the conversion of a coal-containing feedstock to a gas product comprising methane, comprising the steps of:

- a) forming a H_2/CO treatment gas by the partial oxidation of carbon;
- b) contacting said H_2/CO treatment gas with a coal feedstock at a reaction temperature of from about $700^{\circ}C$ to about $900^{\circ}C$ and for a reaction time sufficient to convert at least a portion of the volatile matter in the coal-containing feedstock to a product gas comprising methane;

- c) recovering a purified carbon product from said contacting step; and
- d) recycling at least a first portion of said purified carbon product to said step of forming a H_2/CO treatment gas.

13. (Original) A method as recited in Claim 12, further comprising the step of transporting at least a second portion of said purified carbon product to a boiler and combusting said purified carbon product.

14. (Original) A method as recited in Claim 12, further comprising the step of transporting at least a second portion of said purified carbon product to a boiler and combusting said purified carbon product with at least a portion of said methane.

15. (Original) A method as recited in Claim 12, further comprising the step of combusting at least a portion of said methane in a combined cycle generator.

16-23. (Cancelled)